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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,631	07/08/2003	Sean Chang	2519-0170PUS1	1454

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EXAMINER

FISCHER, JUSTIN R

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 02/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/615,631

Applicant(s)

CHANG ET AL.

Examiner

Justin R. Fischer

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) 7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>112205</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Newly submitted claim 7 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: claim 7 is directed to an optical device assembly, while originally drafted claims 1-6 are directed to a method of forming such an assembly. In this instance, the claimed assembly can be formed by a materially different method, for example one in which the adhesive is not cured. Additionally, the optical assembly can be formed by including the spacers in an adhesive mixture, as opposed to forming them on the edges and subsequently applying adhesive therebetween.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 7 is withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Admitted Prior Art (Page 2, Paragraph 4) and further in view of Florence (US 2003/0112510, newly cited). As best depicted in Figure 1A, the APA discloses a known

Art Unit: 1733

method of bonding optical devices, wherein an adhesive 14 is applied along two opposite edges. The APA further recognizes that the adhesive can also function as a spacer of two optical devices to form an air gap 21. However, the APA is silent as to a method in which adhesive is applied between a pair of spacers arranged on opposite edges. Florence, on the other hand, is similarly directed to a method of fabricating an air gap between optical devices, wherein (a) spacers can be distributed within the adhesive and applied to the edges of the optical devices (similar to the APA) or (b) spacers can be manufactured directly on the perimeter of the optical devices and adhesive is placed therebetween (Paragraph 20- Page 2). Thus, Florence recognizes the method of the APA and that of the claimed invention as being alternatives. Absent any conclusive showing of unexpected results, one of ordinary skill in the art at the time of the invention would have found it obvious to practice a method in which at least two spacers are initially formed on opposite edges of an optical adhesive and adhesive is subsequently arranged therebetween. It is emphasized that Florence specifically suggests the claimed method as being an alternative to that commonly practiced in the optical industry and set forth by the APA, there being a reasonable expectation of success in modifying the method of the APA.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over the APA and Florence as set forth in claim 1 above and further in view of Benneyworth (US 6,704,145, of record). As noted above, the APA in view of Florence suggests a method in which at least two spacers are formed on opposite edges of an optical device and adhesive is subsequently arranged therebetween. While the APA and Florence fail to

Art Unit: 1733

suggest how the spacers are formed, vapor deposition is extremely well known and commonly used method in the manufacture of spacers in the optical industry, as shown for example by the Admitted Prior Art (Paragraph 4 and Figure 1B) or Benneyworth (Abstract). Absent any conclusive showing of unexpected results, one of ordinary skill in the art at the time of the invention would have found it obvious to form the spacers of the APA using the well known and conventional technique of vapor deposition.

5. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over the APA and Florence as applied in claim 1 above and further in view of either one of Zhou (US 5,953,469, of record), Maule (US 5,434,663, of record), or Fushimi (JP 2003-149414, of record). It is initially noted that applicant cannot rely upon the foreign priority papers to overcome this rejection (with respect to Fushimi) because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

As noted above, the APA in view of Florence substantially teaches the method of the claimed invention, including the application of at least two spacers to a first optical substrate and the subsequent application of an adhesive between adjacent spacers. While the spacers of the APA in view of Florence are not formed as a metal coating film or a dielectric coating film, each of these materials is commonly used in the manufacture of spacers in the optical industry, as shown for example by either one of Zhou (Column 12, Lines 20-26), Maule (Column 2, Lines 25-35), or Fushimi (Abstract). Absent any conclusive showing of unexpected results, one of ordinary skill in the art at the time of the invention would have found it obvious to form the spacers of the APA as

Art Unit: 1733

either a metal coating film or a dielectric coating film as each form is consistent with the materials used in the optical industry.

6. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over the APA and Florence as applied in claim 1 above and further in view of Tamura (US 6,137,555, of record). As noted above, the APA in view of Florence substantially teaches the method of the claimed invention, including the application of at least two spacers to a first optical substrate and the subsequent application of an adhesive between adjacent spacers. In particular, Florence broadly suggests that adhesive would be placed between the spacers. While Florence fails to expressly suggest the application of a centrifugal force (via a rotary disc) to spread the adhesive, it is well recognized that such a technique is practiced in the optical industry to provide a smooth and even layer of adhesive, as shown for example by Tamura (Column 3, Line 45 – Column 4, Line 20). Absent any conclusive showing of unexpected results, one of ordinary skill in the art at the time of the invention would have been amply motivated to spread the adhesive of the APA in view of Florence in accordance to the limitations of the claimed invention. It is emphasized that such a technique is extremely well known and commonly used technique to provide a smooth and even layer of adhesive and in the method of the APA in view of Florence, one of ordinary skill in the art at the time of the invention would have desired an even application of adhesive to provide a consistent bond between the optical devices.

Response to Arguments

7. Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection. It is initially noted that the rejection with Suh has been removed in view of applicant's amendments submitted on November 22, 2005. In particular, the adhesive of Suh is present in the areas between the opposite edges on which the spacers are disposed, while the amended claim requires that no adhesive is applied in said area (application is limited to regions between spacers). However, a new set of rejections in view of the APA has been set forth above. In this instance, Florence recognizes the ability to bond optical devices (i) using an adhesive that functions as a spacer (spacer elements or spheres are incorporated in adhesive) or (ii) using separate spacer elements that are manufactured directly on the optical devices and subsequently disposing adhesive therebetween.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

Art Unit: 1733

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R. Fischer** whose telephone number is **(571) 272-1215**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Justin Fischer

February 3, 2006